IN THE CLAIMS

Please amend the claims as follows:

Claims 1-14 (Cancelled)

Claim 15 (Currently Amended): A method of performing a handoff when a mobile terminal equipment is moving from a previous foreign agent to a new foreign agent in a mobile IP network, the method comprising the steps of:

when starting a handoff, ~~additionally~~ performing a regional registration of the mobile terminal equipment ~~to~~ at a home agent ~~performing bicasting and buffering~~ so as to doubly register an address of the mobile terminal equipment by the previous foreign agent and the new foreign agent;

determining whether ~~or not~~ an IP packet received by said home agent during said handoff is a real-time IP packet or a non-real-time IP packet;

~~is of real-time traffic when the home agent receives the IP packet destined for the mobile terminal equipment when the double registration is restored,~~

bicasting from said home agent a real-time IP packet received by said home agent during said handoff ~~the IP packet of real-time traffic~~ to both the registered previous foreign agent and the registered new foreign agent~~, and~~;

buffering at the home agent a non-real-time IP packet received by said home agent during said handoff ~~the IP packet of non-real-time traffic to the home agent~~; and

when the handoff is completed, ~~requesting~~ updating ~~of~~ the regional registration ~~to~~ at the home agent so ~~as to perform the regional registration only for~~ only the new foreign agent is registered~~,~~; and

~~when the IP packet of non-real-time traffic is buffered,~~

transferring <u>a buffered non-real-time IP packet received during said handoff from the home agent to the foreign agent</u> the IP packet of non-real-time traffic to the foreign agent having the mobile terminal equipment by the home agent.

Claim 16 (Currently Amended):   A method of performing a handoff when a mobile terminal equipment is moving from a previous foreign agent to a new foreign agent in a hierarchical mobile IP network, the method comprising of the steps of:

when starting a handoff, ~~additionally~~ performing a regional registration of the mobile terminal equipment ~~to~~ <u>at</u> a gateway foreign agent ~~performing bicasting and buffering~~ so as to doubly register an address of the mobile terminal equipment by the previous foreign agent and the new foreign agent;

determining whether ~~or not~~ an IP packet <u>received by said gateway foreign agent during said handoff is a real-time IP packet or a non-real-time IP packet;</u>

~~is of real-time traffic when the gateway foreign agent receives the IP packet destined for the mobile terminal equipment when the double registration, bicasting the IP packet of real-time traffic to both the previous foreign agent and the new foreign agent, and buffering the IP packet of non-real-time traffic to the gateway foreign agent; and~~

<u>bicasting from said gateway foreign agent a real-time IP packet received by said gateway foreign agent during said handoff to both the registered previous foreign agent and the registered new foreign agent;</u>

<u>buffering at the gateway foreign agent a non-real-time IP packet received by said home agent during said handoff ;</u>

when the handoff is completed, ~~requesting~~ <u>updating</u> ~~of~~ the regional registration ~~to~~ <u>at</u> the gateway foreign agent so ~~as to perform the regional registration~~ only ~~for~~ the new foreign agent <u>is registered;</u>, and

~~when the IP packet of non-real-time traffic to the foreign agent having the mobile terminal equipment by the gateway foreign agent~~

transferring a buffered non-real-time IP packet received during said handoff from the gateway foreign agent to the new foreign agent .

Claim 17 (Currently Amended): A method of performing a handoff when a mobile terminal equipment is moving from a previous foreign agent to a new foreign agent in a mobile IP network, the method comprising the steps of:

when starting a handoff, ~~additionally~~ performing a regional registration of the mobile terminal equipment ~~to~~ at a home agent ~~performing bicasting and buffering~~ so as to doubly register an address of the mobile terminal equipment by the previous foreign agent and the new foreign agent;

determining whether ~~or not~~ an IP packet is received by said home agent during said handoff is a real-time IP packet or a non-real-time IP packet;

~~of real-time traffic when the home agent receives the IP packet destined for the mobile terminal equipment when the double registration,~~

bicasting from said home agent a real-time IP packet received by said home agent during said handoff ~~the IP packet of real-time traffic~~ to both the registered previous foreign agent and the registered new foreign agent ~~,~~;

buffering at the previous foreign agent a non-real-time IP packet received by said home agent during said handoff ~~transferring the IP packet of non-real-time traffic to the previous foreign agent, and buffering by the previous foreign agent the IP packet of non-real-time traffic transferred from the home agent~~;

when the handoff is completed and the IP packet of non real-time traffic is buffered,

transferring a non-real-time IP packet from by the previous foreign agent the IP packet of

non-real-time traffic to the new foreign agent having the mobile terminal equipment; and

when the handoff is completercompleted, requesting updating of the regional

registration to at the home agent so as to perform the regional registration only for the new

foreign agent is registered.

Claim 18 (Previously Presented): The method according to Claim 15, wherein said

home agent determines whether or not an IP packet destined for the mobile terminal

equipment is of real-time traffic based on information on a header of the IP packet.

Claim 19 (Previously Presented): The method according to Claim 16, wherein the

gateway foreign agent determines whether or not an IP packet destined for the mobile

terminal equipment is of real-time traffic based on information on a header of the IP packet.

Claim 20 (Previously Presented): The handoff method according to Claim 15,

wherein the home agent determines whether or not an IP packet destined for the mobile

terminal equipment is of real-time traffic based on information on a upper layer, which is

placed in a payload of the IP packet.

Claim 21 (Previously Presented): The method according to Claim 16, wherein the

gateway foreign agent determines whether or not an IP packet destined for the mobile

terminal equipment is of real-time traffic based on information on an upper layer, which is

placed in a payload of the IP packet.

Claim 22 (Currently Amended): The method according to Claim 15, <u>further</u>

<u>comprising:</u>

<u>performing a mobile IP procedure,</u> wherein

said mobile IP network is a cellular phone network in accordance with <u>a</u>

<u>predetermined</u> Radio Access Network ~~standards which can perform a~~ <u>standard corresponding</u>

<u>to said</u> mobile IP procedure,

said mobile terminal equipment is a cellular phone, and

each of said new and the previous foreign agents is a radio network control unit that

can give and receive an authority to control said cellular phone, as a handoff, according to an

SRNC relocation procedure.

Claim 23 (Currently Amended): The method according to Claim 16, <u>further</u>

<u>comprising:</u>

<u>performing a mobile IP procedure,</u> wherein

the mobile IP network is a cellular phone network in accordance with <u>a predetermined</u>

Radio Access Network ~~standards which can perform a~~ <u>standard corresponding to said</u> mobile

IP procedure,

the mobile terminal equipment is a cellular phone, and

each of the new and the previous foreign agents is a radio network control unit that

can give and receive an authority to control the cellular phone, as a handoff, according to an

SRNC relocation procedure.

Claim 24 (Previously Presented): The method according to Claim 22, wherein said

radio network control unit piggybacks a mobile IP message onto a control message according

to the SRNC relocation procedure.

Claim 25 (Previously Presented): The method according to Claim 22, wherein said radio network control unit detects a start time and end time of the handoff according to an SRNC relocation procedure, and, when the cellular phone can establish communication according to mobile IP, notifies the cellular phone of the start time and end time of the handoff according to the mobile IP procedure.

Claim 26 (Previously Presented): The method according to Claim 22, wherein the radio network control unit detects a start time and end time of the handoff according to an SRNC relocation procedure, and, when the cellular phone cannot establish communication according to mobile IP, notifies the cellular phone of the start time and end time of the handoff according to the SRNC relocation procedure, and autonomously performs a regional registration of the cellular phone or changes the regional registration.

Claim 27 (Previously Presented): A method according to Claim 22, wherein after a plurality of radio network control units have accommodated the cellular phone, a previous one of the plurality of radio network control units have accommodated the cellular phone, a previous one of the plurality of radio network control units assumes that an SRNC relocation procedure generated after a predetermined transfer of an authority to control the cellular phone is a handoff procedure, so as to detect the start time and end time of the handoff.

Claim 28 (Currently Amended): An agent apparatus, performing as a home agent or a gateway foreign agent, for transferring IP packets destined for a mobile terminal equipment in a mobile IP network, to which mobile terminal equipment is moving, the agent apparatus comprising:

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a means for, upon receiving <u>during a handoff</u> an IP packet destined for the mobile terminal equipment when the mobile terminal equipment is doubly registered <u>to a previous foreign agent and new foreign agent</u> during ~~a~~ <u>said</u> handoff, determining whether ~~or not~~ the IP packet is <u>a real-time IP packet or a non-real-time IP packet</u>~~of real-time traffic~~;

a means for bicasting ~~the IP packet~~ <u>a real-time IP packet received by said agent apparatus during said handoff from the agent apparatus</u> to both the <u>registered</u> previous foreign agent and the <u>registered</u> new foreign agent ~~if the IP packet is of real-time traffic, and~~<u>;</u>

a means for buffering <u>at said agent apparatus a non-real-time IP packet received by said agent during said handoff</u> ~~the IP packet in its agent if the IP packet is of non-real-time traffic~~; and

a means for, when the handoff has been completed ~~and IP packets of non-real-time traffic are buffered~~, transferring ~~the~~ <u>a</u> buffered <u>non-real-time IP packet from the agent apparatus to the new foreign agent</u> ~~IP packets of non-real-time traffic to the new foreign agent having the mobile terminal equipment~~.

Claim 29 (Currently Amended): An agent apparatus, performing as a home agent or a gateway foreign agent, for transferring IP packets destined for a mobile terminal equipment in a mobile IP network, to which mobile terminal equipment is moving, the <u>agent</u> apparatus comprising:

a determining device configured to, upon receiving <u>during a handoff</u> an IP packet destined for the mobile terminal equipment when the mobile terminal equipment is doubly registered <u>to a previous foreign agent and new foreign agent</u> during ~~a~~ <u>said</u> handoff, determine whether ~~or not~~ the IP packet is <u>a real-time IP packet or a non-real-time IP packet</u>~~of real-time traffic~~;

a bicasting device configured to bicast <u>a real-time IP packet received by said agent</u> <u>apparatus during said handoff from the agent apparatus</u> ~~the IP packet~~ to both the <u>registered</u> previous foreign agent and the <u>registered</u> new foreign agent ~~if the IP packet is of real-time~~ ~~traffic~~;

a buffer configured to buffer <u>a non-real-time IP packet received by said agent</u> <u>apparatus during said handoff</u> ~~the IP packet in its agent if the IP packet is of non-real-time~~ ~~traffic~~; and

a transfer device configured to, when the handoff has been completed ~~and IP packets~~ ~~of non-real-time traffic are buffered~~, transfer the buffered <u>non-real-time IP packet from the</u> <u>agent apparatus to the new foreign agent</u>~~IP packets of non-real-time traffic to the new foreign~~ ~~agent having the mobile terminal equipment~~.